

4. (Amended) The method of Claim 3, wherein said amino acid residue is a glutamine residue and said functional group is a γ -carboxamido group.
5. (Amended) The method of Claim 3, wherein said transglutaminase is calcium-independent.
6. (Amended) The method of Claim 3, wherein said transglutaminase is calcium-dependent and said reacting said transglutaminase with said protein is conducted in the presence of calcium.
7. (Amended) The method of Claim 3, wherein said transglutaminase is reacted with said protein in an aqueous environment at a pH of about pH5.0 to pH9.0 and a temperature of 4°C to 55°C for a time of about 30 seconds to about 2 days.
8. (Amended) The method of Claim 3, wherein the ratio of the concentration of said ammonium salt to the concentration of said protein to be labeled is more than about 10.
9. (Amended) The method of Claim 8, wherein the concentration of said protein to be labeled is about 1 μ M to about 40mM and the concentration of said ammonium salt is about 10 μ M to about 10M.
10. (Amended) A protein containing an amino acid residue with a functional group isotopically labeled according to the method of Claim 3.
11. (Amended) A protein containing a glutamine residue with a functional group isotopically labeled according to the method of Claim 3.--

Please add the following new claims:

- 16. (New) An isotopically labeled protein, prepared by a process, comprising reacting a transglutaminase with a protein in the presence of an isotope-labeled ammonium salt.

17. (New) The isotopically labeled protein of Claim 16, wherein said transglutaminase is reacted with a functional group of an amino acid residue and said amino acid residue is a glutamine residue and said functional group is a γ -carboxamido group.

18. (New) The isotopically labeled protein of Claim 16, wherein said transglutaminase is calcium-independent.

19. (New) The isotopically labeled protein of Claim 16, wherein said transglutaminase is calcium-dependent and said reacting said transglutaminase with said protein is conducted in the presence of calcium.

Q2 20. (New) The isotopically labeled protein of Claim 16, wherein said transglutaminase is reacted with said protein in an aqueous environment at a pH of about pH5.0 to pH9.0 and a temperature of 4°C to 55°C for a time of about 30 seconds to about 2 days.

21. (New) The isotopically labeled protein of Claim 16, wherein the ratio of the concentration of said ammonium salt to the concentration of said protein to be labeled is more than about 10.

22. (New) The isotopically labeled protein of Claim 21, wherein the concentration of said protein to be labeled is about 1 μ M to about 40mM and the concentration of said ammonium salt is about 10 μ M to about 10M.--

SUPPORT FOR THE AMENDMENTS

Applicants have rewritten Claim 3 in independent form. Accordingly, support for amended Claim 3 can be found in Claims 1-3, as originally filed. Applicants have also amended Claims 4-11, such that they properly depend from amended Claim 3, rather than canceled Claim 1. Support for amended Claims 4-11 can be found in the same claims, as